**Name:** Victoria Guan **Date:** 11/21/15 **Grades:** K-1 **Subject:** First Grade ICT

**Group Size:** 20-25 Students **Time:** 45 minutes   
  
**Lesson Topic:** Water Cycle

Lesson Objective: Students will be able to investigate how precipitation occurs.

**Standards**:   
NYS Science Standard 4: 2.1c Water is recycled by natural processes on Earth

CCSS.ELA-LITERACY.W.1.1

Write opinion pieces in which they introduce the topic or name the book they are writing about, state an opinion, supply a reason for the opinion, and provide some sense of closure.

CCSS.ELA-LITERACY.SL.1.1

Participate in collaborative conversations with diverse partners about grade 1 topics and texts with peers and adults in small and larger groups.

**Materials:**   
  
The Cloud Book by Tomie de Paola  
Different picture of clouds (dark cloud, white fluffy cloud, thin clouds)  
Shaving Cream   
Water   
Clear Cups (6)   
Food Coloring (6 different colors)   
Crayons   
Markers   
Worksheet – Scientist Observation   
Pencil

Smartboard   
Chartpaper  
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**Content Vocabulary:**   
Precipitation: The liquid and solid water particles that fall from clouds and reach the ground

(Rain, Hail, snow, hail)

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**Background Knowledge:**   
  
Show a different picture of clouds (dark cloud, white fluffy cloud, thin clouds)   
Ask students, “Looking at these pictures, what are your **noticing, thinking and wondering**? (NTW)

*Student T&T*   
1. Share with their partners   
2. Students share out their noticing, thinking and wondering while teacher charts out their responses under N/T/W

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**Read Aloud: The Cloud by Tomie de Paola**  
  
1. Explain to students that the book is non fiction and will have a lot of facts and to check their notice, thinking and wondering chart   
2. Throughout the read aloud ask recall questions, stop & study the page   
3. Have students’ choral read keywords with definition  
4. End of read aloud: Student Turn & Talk- “List the facts you learned across your fingers.”   
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**Teach**   
  
Write the word Precipitation on the board. Have students Spell & Cheer the word 3 times.   
Ask students what do they think precipitation means. Write definition on board:   
 Precipitation: The liquid and solid water particles that fall from clouds and reach the ground

(Rain, Hail, snow, hail) Today in science we will investigate how it rains!

**Experiment**: **Make a Rain Cloud in a Cup**   
Students will work in their table groups (4-5 students per table) Students will share 1 model per table.

Teacher will read the directions- and model the set up.   
  
Directions:   
1. Fill the cup with ¾ cup of water   
2. Add Shaving cream on top   
3. Add a few drops of food coloring (each student gets a turn to add one drop)   
4. Observe & record your findings.

**Differentiation:**Students that are high (1-2 student from each team)– will read the directions to the experiment and facilitate their tables to make sure students are following directions.

Students that need the extra support will have access to visuals. Directions will be written with fewer words and with more visuals of each step.

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**Observation & Recording**   
  
Students will record their findings & observation & Answer the following questions:   
  
Worksheet will include:   
1. What did you observe: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2. Why do you think it takes a while for the food coloring to drip through the shaving cream?:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  
3. In what ways is this experiment like our weather?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

4. What happens when the clouds get too full of rain droplets?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3. Draw & Label your Picture of what happened.   
  
**Differentiation**: Students will have specific worksheets that have sentence starters.   
“In this experiment I observed \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. It takes a while for the food coloring to drip through the shaving cream \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. This experiment is like our weather\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. When the cloud gets too full of rain drops, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.  
Draw & Label your Picture of what happened. (Provide material keywords)

**Share**

Students will present to their class what their table group observed.   
  
*Student Turn & Talk Question*:   
**“In what ways is this experiment like our weather?”**   
**“What happens when the clouds get too full of rain drops.”   
  
Big Idea-** The shaving cream represents clouds and the food coloring represents precipitation. In the water cycle, the water droplets within a cloud continue to grow until they become heavy and fall through the clouds to the Earth.  The same thing is happening in our experiment.  The food coloring becomes heavy as it saturates the shaving cream.  The molecules in the cold water are moving slowly, so it takes longer for the food coloring to spread throughout the water.

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**Homework:** Make a Cloud book

**Extension:** Make a cloud poster with the precipitation process using materials (cotton balls, etc)

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| **Category** | **4** | **3** | **2** | **1** |
| **Illustration(s)** | Illustration of creation is clear, detailed and includes labels & captions like a scientist. | Illustration of creation is clear, detailed and includes labels. | Illustration of creation is somewhat clear, and includes some labels. | Illustration is not clear and does not have labels. |
| **Writing** Sentences:   What do you observe?  In what ways is this experiment like our weather?  Why do you think it takes awhile for the food coloring to drip through the shaving cream?  What happens when the clouds get too full of rain droplets? | Wrote **All**  sentences describing what they observed. | Wrote 3 sentence about what they observed. | Wrote 2 sentence about what they observed. | Wrote 1 sentence about what they observed. |
| **Participation  (Experiment)** | Turn & talk and Worked with group the whole time. | Turn and talk with partner & work with group for half the time. | Turn and talk with partner & tried to work with group. | Turn and talk with partner once. |

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**Rubric:**